Wednesday, 10/12/2008 2:37:26 PN

liser:

Chantal Lavoie

Process Sheet

Customer Job Number : CU-DAR001 Dart Helicopters Services

: 43969

: 10053 **Estimate Number**

P.O. Number

This Issue

: 10/12/2008

: NC

: 11

First Issue Previous Run

Checked & Approved By

Written By

Comment

Prsht Rev.

: 34715

Type

02.09.05

S.O. No. :

: SKIDTUBES

Added DSK 066

Material **Due Date**

Drawing Name

Part Number

Drawing Number

Project Number

Drawing Revision

: 08/01/2009

: D26001160

: N/A

: D1

: 3" OUTER TUBE

D2600 REV D1

Qty:

83 Um:

C209/03/14

Each

Additional Product

Job Number:



Seq. #:

Machine Or Operation:

: Est. D:

Description: **PURCHASING**

KJ/RF

1.0 PG



C208/12/10

C/09/04/09/84



Comment: PURCHASING

Issue P/O:

- a) Extrude as per Dwg D2600
- b) Material: 6061-T6 (QQ-A-200/8)
- c) Minimum yield tensile strength = 35 ksi
- d) Minimum ultimate tensile strength = 40 ksi
- e) Minimum elongation = 8%
- f) Order at 160" long
- g) Bon L Canada Inc. tool #897121
- h) To be packed per DSK 066
- i) Pull test to ASTM standard B221 required.

j) Material certification is required

2.0 D26001160P Extrusion Round 3" 206



Comment: Qty.:

1.0000 Each(s)/Unit Total:

83.0000 Each(s)

Extrusion Round 3" 206

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

4.0 QC6 DIMENSIONAL CHECK

3.0

Comment: DIMENSIONAL CHECK

Inspect dimension per Dwg D2600

Check Pull test per Dwg D2600 for compliance page attached

Check hardness with Webster tester

Page 1

Wednesday, 10/12/2008 2:37:26 PM Chantal Lavoie Ùser: **Process Sheet** Drawing Name: 3" OUTER TUBE Customer: CU-DAR001 Dart Helicopters Services Job Number: 43969 Part Number: D26001160 Job Number: Seq. #: Description: **Machine Or Operation:** PACKAGING 1 PACKAGING RESOURCE #1 Comment: PACKAGING RESOURCE #1 Identify and Stock Location: QC21 Comment: FINAL INSPECTION/W/O RELEASE Job Completion

Dart Aerospace Ltd

W/O:			WORK ORDER CHANGES													
DATE	STEP	PRO	OCEDURE CHA	NGE	E	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval :						
				addition .					g.							
								į.								
						l										
Part No	:	PAR #:	Fault Cate	gory:	_ NCR:	Yes N	io DQ	A:	_ Date: _							
	R	esolution:	Dispositio	n:	QA: N	/C Clo	sed:		Date: _							
NCR:			WORK ORD	ER NON-CONFORM	ANCE (NCR)										
DATE	STEP	Description of NC			tion B	\:O		cation	Approval	Approval						
DAIL	0121	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Sect	ion C	Chief Eng	QC Inspector						
,				tr												
	1		1		1					1						

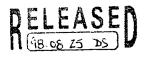
NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE





DESI	AND THE REPORT OF THE PARTY OF	DRAWN BY	DART AEROSPACE LTD hawkesbury, ontario, canada
CHE	KED	APPROVED	DRAWING NO. REV. D
4		1 4/3	D2600 SHEET 1 OF 5
DATE			TITLE SCALE
98.	08.20		EXTRUSION 1:1
Α		97.01.21	NEW ISSUE
В		97.09.09	CHANGE MATERIAL SPEC.
С		98.04.16	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.
D	1	98.08.20	INCREASE MIN. UTS TO 40 KSI
DI		,01-04-17	ADD PART NUMBERS + DIE NUMBERS + 4



GENERAL NOTES

1. MATERIAL: 6061-T6 (QQ-A-200/8)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 42969

MINIMUM YIELD TENSILE STRENGTH = 35 ksi MINIMUM ULTIMATE TENSILE STRENGTH = 40 ksi MINIMUM ELONGATION = 8 %

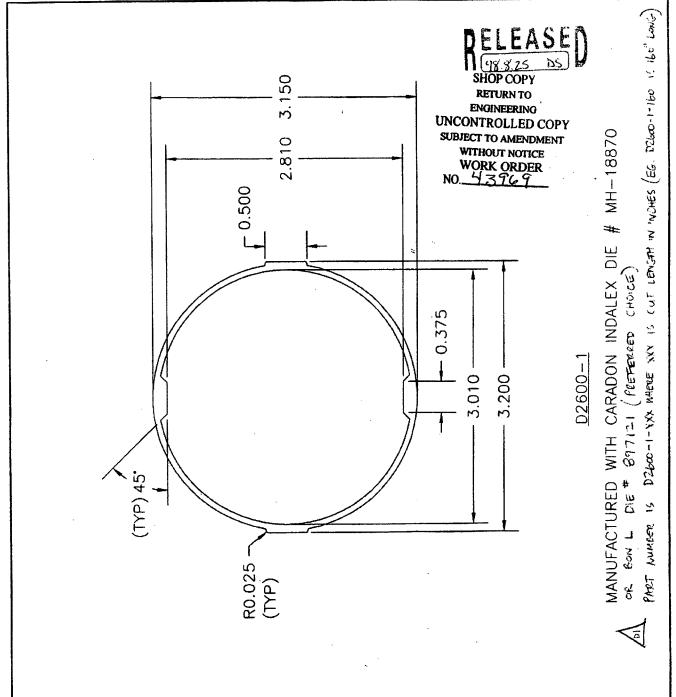
A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES.

- 2. BREAK ALL SHARP CORNERS 0.010 MAX.
- 3. NO TOOLING MARKS.
- 4. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5. ALL DIMENSIONS ARE IN INCHES.





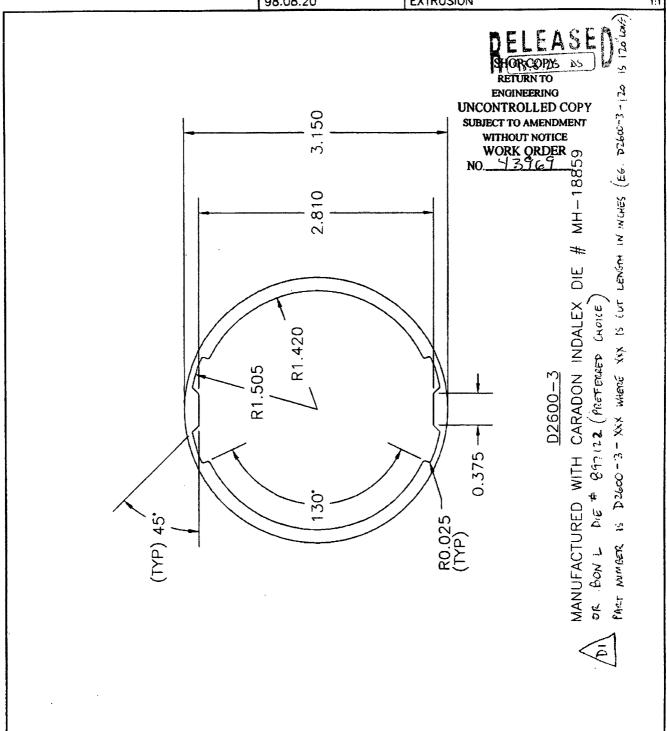
DESIGN	DRAWN BY		SPACE LTD Ontario, canada
CHECKED	APPROVED	DRAWING NO. D2600	REV. D SHEET 2 OF 5
DATE	7	TITLE	SCALE
98.08.20		EXTRUSION	1:1







DESIGN	DRAWN BY	DART AEROS HAWKESBURY, ONTA	
CHTCKED	APPROVEO	DRAWING NO.	REV. D
KE	14	D2600	SHEET 3 OF 5
DATE		TITLE	SCALE
98.08.20		EXTRUSION	1:1





ORDER DATE

12/11/08

ACC # 00046024

SHIP TO DART AEROSPACE LTD. 1270 ABERDEEN ST. ON HAWKESBURY K6A 1K7 CN

PHONE 613-632-5200

46024

CUSTOMER ID

SOLD TO / PURCHASER DART AEROSPACE LTD. 1270 ABERDEEN ST HAWKESBURY ON K6A 1K7 CN

PHONE 613-632-5200

CUSTOMER PO NUMBER

7802

INVOICING COMPANY AND LOCATION SIGNATURE ALUMINUM CANADA **500 EDWARD AVENUE** RICHMOND HIL ON L4C 4Y9

REFER TO THESE NUMBERS ON ALL CORRESPONDENCE

TERMS / FREIGHT 0 / P

SHIPPING MANIFEST

MANIFEST DATE 01-12-09 MANIFEST NUMBER 653081

SALES ORDER NUMBER 41303 SALES REP

GREDIT REP HAMBROOK, PAU

905-508-3250

FIELD SALES REP **CUST SERVICE REP** Kutter A **Burton D**

57375 59358 450-435-6551

SALESMAN

BILL OF LADING NUMBER 08387470

905-427-2227

ALLOY & TEMPER FINISH DESCRIPTIONN THIS SHIPMENT NEG. PART NUMBER ITEM OFFICINAL PREVIOUS LENGTH FABRICATION DESCRIPTION MBR OF UNIT QUANTITY DUE UNIT GROSS POUNOS NET CHANTITY ORDER QUANTITY SHIPPED QUANTITY **CUSTOMER PART NUMBER** CUTTING TOLERANCE SHIPPING TOLERANCE KG 02 0 DAA-897121-1 6061 **/T6** MILL 2 579 559 KG M 0 D2600-1-160 160" CERTIFICATE OF COMP 361.70 M 0 PC +5/16 " (+015-015,0095-0070) 89 PC 83 -0 " LOT/TKT DETAIL: 21 PC 41303020 / 202919 1 139 129 41303021 / 203000 1 430 68 PC 440

.160

RIH

308

LOCATION TRAILER NUMBER

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping manifests and signed and dated below by customers authorized representatives.

No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping manifest were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

PAGE

2 579 559 KG 361.70 M 89 PC TOTALS

1



CERTIFICATE OF COMPLIANCE

SIGNATURE ALUMINUM CANADA

500 EDWARD AVENUE RICHMOND HILL, ON L4C 4Y9

Cert Date	Cost No.	Sales Order	Page
01/12/09	185955	41303	1
Creet DC	27 No.		Пате
7802	08387470	41303020	1/12/09

Sold To DART AEROSPACE LTD.

1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

hem No	Part No	Sem Description				Cust Part
2.000	DAA-897121-1	160" Mill 600	61 T6			D2600-1-160 ,
Gross Weight	139 K	GŚ				
Net City	129 KG	21	PC	85	М	1 PKG

AMS-QQ-A-200/8 & ASTM B221-08

Mechanical: Tests: Test Tensile

MPA / KSI <

/ Yield

MPA / KSI / %Elongation . Conductivity Drift HREW

.04

.35

286.9 / 41.6 Chemical Limits:

MIN:

MAX:

.40

.80

SI

.00

.70

.00 .15 .80 .40 .15 1.20

254.5 / 36.9

.00 .00 EA: .15 TOT: . 25

11.8

.05 .15

OTHER

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgment form. No other warranties are applicable.

D. VanBakel, QA Manager Signature Aluminum Canada Inc



CERTIFICATE OF COMPLIANCE

SIGNATURE ALUMINUM CANADA

500 EDWARD AVENUE RICHMOND HILL, ON L4C 4Y9

Cart Flore	Cort No	Sales Order	Page
01/12/09	185956	41303	1
Circl PO			Date
7802	08387470	41303021	1/12/09

•

DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

BLU MD	Part No. 144	m Description		Gust Part
2.000	DAA-897121-1	160" Mill 6061 T6		D2600-1-160
roes Weight	440 KGS			
let City	430 KG	68 PC	276 M	1 PKG

AMS-QQ-A-200/8 & ASTM B221-08

Mechai Test No.		Tests: nsile / KSI		Y MPA	ield / KSI	*1	Elongat	tion	Cond	uctivity	Bend/ Drift HREW
1 Chemi	286.9 cal Li	/ 41 .0 mits: FE	cu	254.5 MN	/ 36.9 MG	CR	ZN	11.8 TI		. 0 Other	91
MIN:	. 40	.00	.15		.80		.00		EA: TOT:	.05 .15	

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D. VanBakel, QA Manager Signature Aluminum Canada Inc

Chantal Lavoie

From: Burton, Doris [Doris.Burton@signaturealuminumcanada.com]

Sent: March 16, 2009 10:38 AM

To: Chantal Lavoie

Subject: *****SPAM***** RE: *****SPAM***** FW: DAA-897121

Chantal, we have received the sample and our QA confirmed that the metal is out of round. The authorization for the return is # 38051. We will pick up the metal and issue a full credit. I have processed a replacement order and we'll extrude asap. Thank you for your patience.

Doris Burton

Customer Account Representative Signature Aluminum Canada Inc.

Phone: 1-800-563-1079 Fax: 1-800-565-8339 doris.burton@signaturealuminumcanada.com



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----Original Message----

From: Chantal Lavoie [mailto:clavoie@dartaero.com]

Sent: Friday, March 13, 2009 9:35 AM

To: Burton, Doris

Subject: RE: *****SPAM***** FW: DAA-897121

Doris, I just send out this morning the sample that are no good, if you think it best to place it now for the replacement so we would be able to get it for end of March.

So yes go for it.

Thanks Chantal

From: Burton, Doris [mailto:Doris.Burton@signaturealuminumcanada.com]

Sent: March 13, 2009 9:25 AM

To: Chantal Lavoie

Subject: *****SPAM***** FW: DAA-897121

Chantal, do you want me to enter a replacement order or do you wish to await the results of the sample? Please let me know.

Thank you.

Doris Burton

Customer Account Representative Signature Aluminum Canada Inc.

Phone: 1-800-563-1079 Fax: 1-800-565-8339 doris.burton@signaturealuminumcanada.com



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-----Original Message-----From: Burton, Doris

Sent: Thursday, March 12, 2009 1:41 PM

To: 'Chantal Lavoie' **Subject:** DAA-897121

Chantal, our Quality Control people insists on a sample before they accept the return. Is there any way that you can send them a sample today via Purolator - Collect (account # 0141687) at 500 Edward Avenue, Richmond Hill, Ontario L4C 4Y9; attn.: Doug van Bakel.

In the meantime, do you still want me to process a replacement order or do you prefer to wait for the test results of the sample?

Doris Burton

Customer Account Representative Signature Aluminum Canada Inc.

Phone: 1-800-563-1079 Fax: 1-800-565-8339 doris.burton@signaturealuminumcanada.com



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SALES SUBJECT TO OUR PUBLISHED TERMS AND CONDITIONS.
VENTES SUJETTES AUX MODALITÉS ET CONDITIONS PUBLICES.

ORDER ACKNOWLEDGMENT

CONFIRMATION DE COMMANDE ACKNOWLEDGMENT DATE CATE DE CONFIRMATION
REFER TO THESE
NUMBERS ON ALL
CORRESPONDENCE. 03-13-09 COMM DE COMM MÉSÉREZ-VOUS À CES

SHIP :	ro/expédi	ÉÀ				SOLD TO/V				43	TOPPEME	r A	LUNGIA	iom cani		NUMÉROS I CORRESP	POUR TOUTESALES C		umbern de comm
1270 HAW	r Aeros D Aberi Kesbur' 187	Y YEEL	CE LA N ST. NADA	•	ON	DART A 1270 A HAWKES K6A 1K	BUR	SPACE LT DEEN ST. Y	ОИ	9. 10	D.BON BONTO W 2X8	250	21, 3	PAT "7" Ci		CREDIT REP. DU CH HAMBRO	Р RÉDIT DOK, PA 08-3250	SALE REP.	S ROT DES VENTES
1	NE 613	-63	2-52	00		_					TERMS	CONDIT	CR66			FIELD SAL REP. REGI	ES REP ONAL DES VENTES	CUS	T SERVICE REP SERVICE CLIENTÉLE
4	6024	03/	13/0	9	7802	NONE DE COMM. DE REPLACE		108		FREIG	1.% 1 HT LOC PORT LOCATIO	ORCE W TYPE	ave N	et 30 D END USE UTALISATION FIN 202	SALESMAN VENDEUR 043	Kutter	r A 35-6551		rton D 5-427-2227
-	ading no . Innaisbement	1	DATE DE LIMRA		AFC PART	NUMBER E DU MFG		ALLIAGE &	TEMPER TREMPAGE	PP	FINISH FAB CODE CODE DE	+		FINISH DESC DESC. DE LA FABRICATION	CRIPTION A FINITION DESCRIPTION BRICATION	אונ	UNIT PRICE PRIX A L'UNITÉ	JNIT JNITÉ	SHIP DATE DATE DEXPÉDITION PRÉVUE
NO. DITEM	ORDER GUAN OTÉ COMMAN	IDÉE	JNITE	NUMÉ *	RO DE PE	NT NUMBER ECE DU CLIENT 		CUTTING TO TOLERANCE ISIL US	DE COUPE		i .	alu	minu	SHPPING TO TO ERANCE O	EXPEDITIO	*****			
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						C	cus	FOMER NO	otes:		e e								
												;							
1									_ _				COCE III E	WS PERMISSY	ON				

NO RETURNMATERIALS WILL BE ACCEPTED FOR CREDIT WITHOUT PERMISSION AUCUN RETOUR DE MATÉRIEL NE SERA ACCEPTÉ POUR CRÉDIT SANS PERMISSION

1

hantal Lavoie

From:

L Lacelle [ilacelle@dartaero.com]

Sent:

March 4, 2009 2:20 PM

To:

'Chantal Lavoie'

Cc:

'Jason Murdoch'

Subject:

FW: NC D2600-1-160

Importance: High

Chantal,

Please contact BonL

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]

Sent: March 4, 2009 2:08 PM

To: 'L Lacelle'

Subject: NC D2600-1-160

Importance: High

39 PCD

,43969

Hi L,

We have an issue with the D2600-18-160 B43969.

This material was received in on 09-01-13 and inspected on 09-01-14. The material appears to be oval on one side, causing it to be too wide (3.200", and is 3.245"-.249") The wall thicknesses are alright, and the height of 3.150" is within tolerance as well.

Just off the top of my head, it's almost like the die is getting too wide. Can you contact the supplier and have them check out the die dimensions?

Jason Murdoch

Oc. Coordinator

jmurdoch@dartaero.com

1-800-563-1079



ORDER DATE

ACCT# 00046024

SHIP TO DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY ON K6A 1K7 CN

PHONE 613-632-5200

CUSTOMER ID

SOLD TO / PURCHASER DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY ON ... K6A 1K7 CN

PHONE 613-632-5200

CUSTOMER PO NUMBER

INVOICING COMPANY AND LOCATION SIGNATURE ALUMINUM CANADA **500 EDWARD AVENUE**

TERMS / FREIGHT

0 / P

LOCATION TRAILER NUMBER

RIH

QUEBEC

RICHMOND HIL ON L4C 4Y9

SALESMAN

59358

REFER TO THESE NUMBERS ON ALL CORRESPONDENCE MANIFEST DATE 05-04-09 MANIFEST NUMBER 658797 SALES ORDER NUMBER

SHIPPING MANIFEST

46486 CREDIT REP SALES REP HAMBROOK, PAU

905-508-3250 FIELD SALES REP

CUST SERVICE REP Kutter A **Burton D** 450-435-6551 905-427-2227

BILL OF LADING NUMBER JOB ANGCOSAG

46	04/	09/09	7802 RE	PL.					0839204	1 6	
ITEM	ORIGINAL		PREVIOUS	MFG. PART NUMBER	ALLOY & TEMPER	FINISH DESCRIPTIONN		THIS SHIPME	VT		
NO.	ORDER QUANTITY	UNIT	SHIPPED QUANTITY	CUSTOMER PART NUMBER	LENGTH CUTTING TOLERANCE	FABRICATION DESCRIPTION SHIPPING TOLERANCE	NBR OF PKGS	GROSS POUNDS	NET QUANTITY	UNIT	QUANTITY DU
01		KG	0	DAA-897121-1	6061 /T6	MILL	2	563	513	KG.	
		М	ړ 0.	D2600-1-160	160"	CERTIFICATE OF COMP			365.76	М	
	83	PC	0		+5/16 "	(+015-015,0095-0070)			90.	, P.C	
	-0,3					for replacement order new order # 46486.	# 453	33.			1
				LOT/TKT DETAIL:		46486011 / 209528	1	283	258		45
				į t		46486011 / 209529	1	280	255		45
						.tr.*			1		-
			·		·					/	
									19/5/	5	
				·							
	<u> </u>	L	<u> </u>		1		2	563	513	KG	<u> </u>

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping manifests and signed and dated below by customers authorized representatives

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PAGE

1

365.76 M 90. PCTOTALS

DRIVER



CERTIFICATE OF COMPLIANCE

SIGNATURE ALUMINUM CANADA

500 EDWARD AVENUE RICHMOND HILL, ON L4C 4Y9

	Cert Date	Cert No	Sales Order	Page
	05/04/09	190801	46486	1
	Cust PO	B/L No	Lot	Date
	7802 REPL.	08392046	46486011	5/04/09
46024	Shire Fee		46024	

DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

item No	Part No II	em Description				Gust Part
1.000	DAA-897121-1	160" Mill 606	1 T6			D2600-1-160
Gross Weight	563 KG	3				
Net Qty	513 KG	90	PC	366	М	2 PKG

AMS-QQ-A-200/8 & ASTM B221-08

	Moohai	ai aa I	Looka										
	Mechai Test No.	Ter	rests: nsile / KSI			ield / KSI	% !	Elonga [.]		Cond	uctivi		nd/ ift HREW
	1 Chemic	300.7 cal Ana	/ 43.	6 2 :	273.8	/ 39.7	: :		10, 1	* *	•••••	.0	91
٠	SI	FE 	CÜ	MN	MG	CR	NI	ZN	GA .	v 	TI	ZR	OTHER
	.66	. 22	. 24	. 03	.89	. 05	.005	.02	.000	.008	.01	.000	.00

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgment form. No other warranties are applicable.

D. VanBakel, QA Manager Signature Aluminum Canada Inc 🛝

50/65/06

81144 Rev. C